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SANTA CRUZ BIOTECHNOLOGY, INC.

PAOX siRNA (m): sc-152006

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

PAOX (polyamine oxidase (exo-N4-amino)), also known as PAO, is a 649 amino acid protein that localizes to both the cytoplasm and to peroxisomes and belongs to the flavin monoamine oxidase family. Expressed in a variety of tissues, PAOX exists as a monomer that uses FAD as a cofactor to catalyze the oxidation of N_1-acetylspermine and N_1-acetylspermidine to spermidine and putrescine, respectively, thereby playing a role in polyamine back-conversion, as well as in the regulation of polyamine intracellular concentration. Multiple isoforms of PAOX exist due to alternative splicing events. The gene encoding PAOX maps to human chromosome 10q26.3, which houses over 1,200 genes and comprises nearly 4.5% of the human genome. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie-Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromatic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

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CHROMOSOMAL LOCATION

Genetic locus: Paox (mouse) mapping to 7 F4.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

PAOX siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PAOX shRNA Plasmid (m): sc-152006-SH and PAOX shRNA (m) Lentiviral Particles: sc-152006-V as alternate gene silencing products.

For independent verification of PAOX (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-152006A, sc-152006B and sc-152006C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

PAOX siRNA (m) is recommended for the inhibition of PAOX expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PAOX gene expression knockdown using RT-PCR Primer: PAOX (m)-PR: sc-152006-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.